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ROBERT E. BUSHNELL
1522 K STREET NW
SUITE 300
WASHINGTON, DC 200051202

EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 06/10/2003

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,595

Applicant(s)

LIM, DEUK-SUNG

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 March 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 82. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Suggestion is to include the reference number 82 to associate with the elastic member in the specification.

Specification

The disclosure is objected under 37 CFR 1.75(a) because on page 4, lines 8-10 (as amended in amendment filed 3/24/03, "the main body is formed with a first, a second, and a third paper transport paths for discharging the recording paper fed **from** the optional device" is not supported in any of the figures nor in the later parts of the specification on page 13, lines 14-16, stating "a first paper transport path 93 guides a paper sheet fed **from** multipurpose feeding unit assembly 20" not optional device 12 or 12' as stated on page 4, lines 4-6; and on page 13, lines 16-17, stating "a second paper transport path 94 guides a paper sheet fed from feeding cassette 15" not optional device 12 or 12' as stated on page 4, lines 4-6.

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Suggestion would be to call element 14 as another optional device; *and/or* change the word "from" to - - to the optional device when the optional device is a sorter or power stacker, and from the optional device when the optional device is a large scale paper feeding unit - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 2-19 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon the jammed paper removing means as described in the specification as only "so constructed that one of cover plates 23 and 23' is formed to be revolved with a hinge shaft 81 in the center and an elastic member such as a tension coil spring is provided between cover plate 23 and base 21" (specification, page 12, lines 14-17). There is no description in the specification nor in the drawings on how the jammed paper removed and how the elastic spring member is related to removing the jammed paper. The applicant's representative argues that there are inherent features of the jammed paper removal means such as in the declaration filed 10/9/02 and the appeal brief filed 5/7/02 on page 6, lines 8-10 in the summary of invention, the statements "when paper is jammed in feeding unit assembly 20, a user pulls assembly 20 in the direction of arrow E of Fig. 6 (Specification 15:4-12), which is resisted by the elastic member (e.g. tension coil spring) which stores mechanical energy when stretched" and on the same page 6, lines 17-19, the statement "guiding members 71 are

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entered into holes 74 (*id.*), and the stored mechanical energy of the elastic member is released as this occurs". Applicant had a clear benefit of having the spring in its location. This benefit was not described in the specification. It wasn't until the appeal brief was filed (5/7/02), that the benefit of the spring's location was finally described. This is evidence of concealment of the best mode. One of ordinary skill in the art was unaware of the benefit applicant's invention provides. There could be other possible ways that this spring is used in jammed paper removal of the instant invention. Such as the spring, with it's stored mechanical energy, is used to assist the operator to open the cover plate to remove the jammed paper and then place the cover plate back to its original location after the jammed paper is removed. In addition, the jammed paper removal means as described in the specification, page 12, lines 14-16, do not include all parts of the feeding unit assembly 20 and the guiding members 71.

Claims 2-19 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The applicant's representative argues that there are inherent features of the jammed paper removal means such as in the declaration filed 10/9/02 and the appeal brief filed 5/7/02 on page 6, lines 8-10 in the summary of invention, the statements "when paper is jammed in feeding unit assembly 20, a user pulls assembly 20 in the direction of arrow E of Fig. 6 (Specification 15:4-12), which is resisted by the elastic member (e.g. tension coil spring) which stores mechanical energy when stretched" and on the same page 6, lines 17-19, the statement "guiding members 71 are entered into holes 74 (*id.*), and the stored mechanical energy of the elastic member is released as this occurs". These features are critical or essential to the

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practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The benefit of the location of the spring was never discussed or hinted at in the disclosure of this application. In the alternative, the above omission is a failure to provide a proper written description since applicant has extensively argue the benefits of the location or interconnection of the spring. This is deemed essential subject matter.

Since the claims at issue are drafted in "means plus function" format, this omission in the specification is especially relevant.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 11, line 14, "mounting providing" is not proper grammar.

As to claim 11, line 17, "mounting a plurality of powered feeding rollers on a rear side of the base member" is unclear as why it is step (4) when step (2), line 13 is the same. Are there more plurality of powered feeding rollers?

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (828) in view of Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418).

Arai discloses a copying machine main body 1 with a manual sheet feed tray 6 that reads on the instant invention's optional auxiliary device located at a first side (right side as seen in fig. 1) thereof, a feeding unit 4 located at the a second side (bottom side as seen in fig. 1) of the main body. Arai also discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that reads on the instant invention's rectangular base member, upper conveyor 33 or upper conveying guide 50 that reads on the instant invention's cover plate, paper feeding means 51 on cover plate 33 and paper feeding means 46 on the base member 32, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the cover plate 33 for pivoting the cover plate 33 when it is separated from the base member 32. The linkage 34 links the cover plate 33 and the base member 32 which reads on the instant invention's elastic member. A handle

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shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

Tominaga (Japan, 10-324435) discloses a medium processing device that eliminates jammed documents, replacing parts, checking and cleaning the inside of a device with an upper guide plate 5 and a lower guide plate 6 held together by a tension spring 18. An operator lifts up the upper guide plate 5 so that it pivots on shaft 11 and separates from lower guide plate 6 at an angle so that a jammed document can be removed. Note abstract and Figs. 1-6. The benefits of using this arrangement with the tension spring 18 is that the guide plates do not fall in and catch the operator's hands when the operator is reaching in to gain access between the guide plates. Note translation done by Schreiber Translations, Inc, page 9, [0011].

Gonidec et al. discloses a linkrod 26 that is a mechanical connection means between a front door 7 and a rear door 21 of a turbojet engine. This linkrod 26 may be replaced by a resilient element, such as a spiral spring. The resilient element preferably imparts a pivoting force to the rear door 21 relative to the front door 7. Note column 4, lines 25-34 and column 6, lines 38-47.

Yokota et al. discloses a printing machine with a printing head 2 swingable around a pivot. A suppressing member link 11 holds the printing head 2 off a platen

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roller 1 and against the force of the set spring 5 when an actuating lever 10, also connected with the suppressing member link 11, is pivoted to move the suppressing member link 11 to raise the printing head 2. This suppressing member link 11 can be a link member or a tension spring 11b like the set spring 5 (Fig. 2). This spring 11b can absorb the tension or stop the tension of the set spring 5. This will prevent bumping of the printing head 2 and the platen roller 1 against each other. Note column 2, lines 49-57, column 4, lines 9-36.

Nagasawa et al. discloses that it is well known in the art to use fewer parts to reduce cost of manufacturing such as links 88 and 89 that comprises a link mechanism used in a sheet feeder. The number of component parts is increased by a complicated link mechanism resulting in a high cost. Note column 3, line 67 – column 4, line 4.

Jones et al. discloses using a paper input tray 10' used in a printer having fewer parts than another paper input tray 10, thus the manufacturing cost and physical wear is less. Note column 4, lines 6-12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Arai by replacing the linkage with that of the spring of Tominaga because there is a problem with manufacturing the linkage of Arai due to the fact it requires many components or features such as an engage pin 70, a first slot 71, a second slot 72, a turning pin 65, and a grip portion 63 (note Arai; column 8, line 66 – column 9, line 18). The manufacturing of this linkage can be costly. Thus, using a tension spring 18 of Tominaga would be simple and cost effective since it reduces the number of components and features needed to allow two plates to separate and permit

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removal of jammed sheets or documents along a paper transport path. The evidence to support such a motivation where a complicated assembly is less desirable over a more simple one is well known in the art. Such evidence is shown by Nagasawa et al. (column 3, line 67 – column 4, line 4) and Jones et al. (column 4, lines 6-12); and such a motivation from a third reference can be shown to combine two references. *In re Sastry*, 62 USPQ2d 1436.

In addition, a linkage and a resilient member such as a spring are equivalent because Gonidec et al. and Yokota et al. shows they are equivalent structures known in the art. Therefore, because these two connecting members were art-recognized equivalents as shown in Gonidec et al. and Yokota et al. at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a linkage for a coil spring member.

Since applicant's representatives argue using *In re Donaldson* and § 112, 6th par. for the limitations of "the jammed paper removing means", examiner points out to the applicant's representatives that MPEP 2106 (II) (C) says "the claimed means plus function limitations" are given "their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed". See *Kemco Sales, Inc v. Control Papers Company, Inc.*, 208 F. 3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Thus, in the specification, page 12, lines 14-17, it states that "the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be resolved with a hinge shaft 81 in the center an elastic member such as a

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tension coil spring is provided between the cover plate 23 and base 21" and page 13, lines 2-3, it states, "the jammed paper removing means **may be** advantageously provided at the other cover plate 23'. This "jammed paper removing means" is interpreted as having alternatives since it is not clear from the language in the original specification. The "jammed paper removing means" may be provide at the cover plate 23 or at cover plate 23' or at both plates 23, 23'. Since the Office personal are to give the claimed means plus function limitations their broadest reasonable interpretations described by the specification, elements of the combination of references of Arai in view of Tominaga, are the same or equivalent to the elements of the instant invention as described in the specification of the instant invention which has been identified as corresponding to the claimed "jammed paper removing means".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the apparatus of Arai in view of Tominaga is equivalent to the instant invention's disclosed in the "jammed paper removing means" under § 112, 6th par. where they both perform the identical function in substantially the same way to achieve substantially the same result. See *Caterpillar Inc, v. Deere & Co.*, 224 F.3d 1374, 56 USPQ2d 1305 (Fed. Cir. 2000). Finding of statutory equivalence under § 112, 6th par. does not require "component by component" equivalence between the relevant structure identified in patent and portion of accused device asserted to be structurally equivalent, even though analysis of equivalents under § 112, 6th par. is

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similar to that under doctrine of equivalents, since limitation of means-plus-function claim is overall structure corresponding to claimed function, and individual components, if any, of that overall structure are not individual limitations; structures with different numbers of parts therefore may be equivalent under § 112, 6th par., since relevant structure is that which "corresponds" to claimed function, and further deconstruction or parsing is incorrect. See *IMS Tech.*, 206 F3d at 110-324435, 54 USPQ2d at 1138 (Fed. Cir. 2000); and *Odetics Inc.*, 51 USPQ 2d at 1225. The specification, page 12, lines 14-17, states " the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be revolved with a hinge shaft 81 in the center and an elastic member such as a tension coil spring is provided between cover plate 23 and base 21". Since there is no explanation in the specification as to how the elastic member functions as part of a "jam paper removal means" except that it is "provided between cover plate 23 and base 21". In addition, the a linkage and a resilient member such as a spring are equivalent as disclosed by Gonidec et al. and Yokota et al.. Gonidec et al. and Yokota et al. show they are equivalent structures known in the art. Therefore, because these two connecting members were art-recognized equivalents as shown in Gonidec et al. and Yokota et al. at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a linkage for a coil spring member.

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Claims 2, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828) as shown by Gonidec et al. (476), and Yokota et al. (896).

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expansibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

Sasaki et al. discloses all elements of the apparatus, process, and process of making except for apparatus, process, and process of making a feeding unit with a jammed paper removing means.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that reads on the instant invention's rectangular base member, upper conveyor 33 or upper conveying guide 50 that reads on the instant invention's cover plate, paper feeding means 51 on cover plate 33 and paper feeding means 46 on the base member 32, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the cover plate

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33 for pivoting the cover plate 33 when it is separated from the base member 32. The linkage 34 links the cover plate 33 and the base member 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdraw the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

Gonidec et al. discloses a linkrod 26 that is a mechanical connection means between a front door 7 and a rear door 21 of a turbojet engine. This linkrod 26 may be replaced by a resilient element, such as a spiral spring. The resilient element preferably imparts a pivoting force to the rear door 21 relative to the front door 7. Note column 4, lines 25-34 and column 6, lines 38-47.

Yokota et al. discloses a printing machine with a printing head 2 swingable around a pivot. A suppressing member link 11 holds the printing head 2 off a platen roller 1 and against the force of the set spring 5 when an actuating lever 10, also connected with the suppressing member link 11, is pivoted to move the suppressing member link 11 to raise the printing head 2. This suppressing member link 11 can be a link member or a tension spring 11b like the set spring 5 (Fig. 2). This spring 11b can absorb the tension or stop the tension of the set spring 5. This will prevent bumping of

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the printing head 2 and the platen roller 1 against each other. Note column 2, lines 49-57, column 4, lines 9-36.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Arai because it is well known in the art that sheet jams occur along a sheet conveyance path in an image forming apparatus and that it is difficult to remove them sometimes especially when it is located in the main body of the image forming apparatus. Sheet jams can occur due to a build up of static electricity, humidity, or heat inside the image forming apparatus causing sheets to shift its moving position, curl up, or stick together. Sasaki et al. discloses that when a sheet conveying passage is long and complicated throughout the copying machine, the duplex copying structure and the sorter, the position where sheets can possibly jam is anywhere in the machine. This makes locating the paper jam more difficult. Also, since the intermediate tray and associated passages and feeding mechanism for copying are within the apparatus, it is not possible to locate the position of jam occurrence from outside of the machine, and therefore, it is necessary to open a cover or the like, thus removing the jam in a cumbersome manner (note Sasaki et al.; column 3, lines 34-48). In order to remove a sheet jam from a sheet path such as the sheet feeder 59 of Sasaki et al. which refeeds the sheet to get a duplex copy, one looks to Arai for an operator-accessible way that is noncumbersome (note Arai; column 2, lines 6-22) to maintain clearing of sheet jam in a re-feeding path of a photocopy with dual-sided printing capabilities. Since Sasaki et al. discloses in the prior art a paper jam can occur along the re-feeding passage due to the sheets being

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curled from pressure and heat from the first sided copying, one would look to Arai to correct the paper jam because both Sasaki et al. and Arai disclose the problematic area of where paper jams occur in a duplex copying system and Arai teaches the solution. Note Arai; column 1, lines 5-11 and lines 20 - 32. The linkage 34 of Arai's sheet jam removal device is equivalent to the instant invention's elastic spring member as disclosed in the "jammed paper removing means" under § 112, 6th par. where they both perform the identical function in substantially the same way to achieve substantially the same result. See *Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374, 56 USPQ2d 1305 (Fed. Cir. 2000). Finding of statutory equivalence under § 112, 6th par. does not require "component by component" equivalence between the relevant structure identified in patent and portion of accused device asserted to be structurally equivalent, even though analysis of equivalents under § 112, 6th par. is similar to that under doctrine of equivalents, since limitation of means-plus-function claim is overall structure corresponding to claimed function, and individual components, if any, of that overall structure are not individual limitations; structures with different numbers of parts therefore may be equivalent under § 112, 6th par., since relevant structure is that which "corresponds" to claimed function, and further deconstruction or parsing is incorrect. See *IMS Tech.*, 206 F3d at 110-324435, 54 USPQ2d at 1138 (Fed. Cir. 2000); and *Odetics Inc.*, 51 USPQ 2d at 1225. The specification, page 12, lines 14-17, states " the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be revolved with a hinge shaft 81 in the center and an elastic member such as a tension coil spring is provided between cover plate 23 and base 21". Since there is

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no explanation in the specification as to how the elastic member functions as part of a "jam paper removal means" except that it is "provided between cover plate 23 and base 21". The function of the elastic member from Figs. 9 and 10, is to allow the cover plate 23, after an operator lifts it up, to stay at a position so the operator removes a sheet jam caught in between the cover plate 23 and base 21; and to keep the cover plate 23 down and mounted to base 21 when the cover plate is placed in its closed position. The linkage 34 of Arai performs the same function such as allowing the upper conveyor 33 after an operator lifts it up to stay at a position so the operator removes a sheet jam caught in between the two conveyors; and keeping the upper conveyor 33 down and mounted to lower conveyor 32 when the upper conveyor 33 is in its closed position. Note column 7, line 48 – column 9, line 67. In addition, a linkage and a resilient member such as a spring are equivalent as disclosed by Gonidec et al. and Yokota et al.. Gonidec et al. and Yokota et al. show they are equivalent structures known in the art. Therefore, because these two connecting members were art-recognized equivalents as shown in Gonidec et al. and Yokota et al. at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a linkage for a coil spring member. Thus, a person of ordinary skill in the art would have recognized the interchangeability of the linkage of Arai for the elastic member disclosed by the specification because they perform the same function in substantially the same way to achieve substantially the same result which is removal of the jammed sheet.

Since applicant's representatives argue using *In re Donaldson* and § 112, 6th par. for the limitations of "the jammed paper removing means", examiner points out to the

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applicant's representatives that MPEP 2106 (II) (C) says "the claimed means plus function limitations" are given "their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed". See *Kemco Sales, Inc v. Control Papers Company, Inc.*, 208 F. 3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Thus, in the specification, page 12, lines 14-17, it states that "the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be resolved with a hinge shaft 81 in the center an elastic member such as a tension coil spring is provided between the cover plate 23 and base 21" and page 13, lines 2-3, it states, "the jammed paper removing means **may be** advantageously provided at the other cover plate 23'. This "jammed paper removing means" is interpreted as having alternatives since it is not clear from the language in the original specification. The "jammed paper removing means" may be at the cover plate 23 or at cover plate 23' or at both plates 23, 23'. Since the Office personal are to give the claimed means plus function limitations their broadest reasonable interpretations described by the specification, elements of the combination of references of Sasaki et al. in view of Arai as shown by Gonidec et al., and Yokota et al. are the same or equivalent to the elements of the instant invention as described in the specification of the instant invention which has been identified as corresponding to the claimed "jammed paper removing means".

Again, the examiner points out that the applicant has not disclosed clearly in the specification how the jammed paper removing means removes the paper. The

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applicant argues the **"the way"** (see page 25 of amendment filed 3/24/03) the applicant's device operates. Examiner disagrees with this because **"the way"** is not supported by the specification. If applicant argues that **"the way"** is inherent, then there are no possible options nor alternatives that the jammed paper removal means is interpreted from the specification. But, the Examiner interprets **"the way"** as "the jammed paper removal means" functions as being the elastic member provided between cover plate 23 and base 21. This is stated in applicant's original disclosure. So, then looking from Figs. 9 and 10, the function of this elastic member is to allow the cover plate 23, after an operator lifts it up, to stay at a position so the operator removes a sheet jam caught in between the cover plate 23 and base 21; and to keep the cover plate 23 down and mounted to base 21 when the cover plate is placed in its closed position. Since **"the way"** as applicant describe it in the remarks of the amendment, is not disclosed in the specification, §112, 6th par. do allow these features to be read into the applicant's claimed "jammed paper removing means".

Claims 2, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (828) in view of Veeder (786) and Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418).

Arai also discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that reads on the instant invention's rectangular base member, upper conveyor 33 or upper conveying guide 50 that reads on the instant invention's cover plate, paper feeding

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means 51 on cover plate 33 and paper feeding means 46 on the base member 32, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the cover plate 33 for pivoting the cover plate 33 when it is separated from the base member 32. The linkage 34 links the cover plate 33 and the base member 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdraw the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

Arai differs from the instant invention by not disclosing an optional auxiliary device and a spring.

Veeder discloses using a laser printing apparatus with an optional auxiliary large capacity input tray 22 mounted on one side of the printer base 12. Note column 6, lines 6-24.

Tominaga (Japan, 10-324435) discloses a medium processing device that eliminates jammed documents, replacing parts, checking and cleaning the inside of a device with an upper guide plate 5 and a lower guide plate 6 held together by a tension spring 18. An operator lifts up the upper guide plate 5 so that it pivots on shaft 11 and separates from lower guide plate 6 at an angle so that a jammed document can be removed. Note abstract and Figs. 1-6. The benefits of using this arrangement with the

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tension spring 18 is that the guide plates do not fall in and catch the operator's hands when the operator is reaching in to gain access between the guide plates. Note translation done by Schreiber Translations, Inc, page 9, [0011].

Gonidec et al. discloses a linkrod 26 that is a mechanical connection means between a front door 7 and a rear door 21 of a turbojet engine. This linkrod 26 may be replaced by a resilient element, such as a spiral spring. The resilient element preferably imparts a pivoting force to the rear door 21 relative to the front door 7. Note column 4, lines 25-34 and column 6, lines 38-47.

Yokota et al. discloses a printing machine with a printing head 2 swingable around a pivot. A suppressing member link 11 holds the printing head 2 off a platen roller 1 and against the force of the set spring 5 when an actuating lever 10, also connected with the suppressing member link 11, is pivoted to move the suppressing member link 11 to raise the printing head 2. This suppressing member link 11 can be a link member or a tension spring 11b like the set spring 5 (Fig. 2). This spring 11b can absorb the tension or stop the tension of the set spring 5. This will prevent bumping of the printing head 2 and the platen roller 1 against each other. Note column 2, lines 49-57, column 4, lines 9-36.

Nagasawa et al. discloses that it is well known in the art to use fewer parts to reduce cost of manufacturing such as links 88 and 89 that comprises a link mechanism used in a sheet feeder. The number of component parts is increased by a complicated link mechanism resulting in a high cost. Note column 3, line 67 – column 4, line 4.

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Jones et al. discloses using a paper input tray 10' used in a printer having fewer parts than another paper input tray 10, thus the manufacturing cost and physical wear is less. Note column 4, lines 6-12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Arai with the large capacity input tray of Veeder because it is known in the art that large print jobs are desired and using a large capacity input tray such as disclosed by Veeder would prevent the operator from resupplying smaller input trays many times, thus saving time and is more efficient.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Arai by replacing the linkage with that of the spring of Tominaga because there is a problem with manufacturing the linkage of Arai due to the fact it requires many components or features such as an engage pin 70, a first slot 71, a second slot 72, a turning pin 65, and a grip portion 63 (note Arai; column 8, line 66 – column 9, line 18). The manufacturing of this linkage can be costly. Thus, using a tension spring 18 of Tominaga would be simple and cost effective since it reduces the number of components and features needed to allow two plates to separate and permit removal of jammed sheets or documents along a paper transport path. The evidence to support such a motivation where a complicated assembly is less desirable over a more simple one is well known in the art. Such evidence is shown by Nagasawa et al. (column 3, line 67 – column 4, line 4) and Jones et al. (column 4, lines 6-12); and such motivation from a third reference can be shown to combine two references. *In re Sastry*, 62 USPQ2d 1436.

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In addition, a linkage and a resilient member such as a spring are equivalent because Gonidec et al. and Yokota et al. shows they are equivalent structures known in the art. Therefore, because these two connecting members were art-recognized equivalents as shown in Gonidec et al. and Yokota et al. at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a linkage for a coil spring member.

Since applicant's representatives argue using *In re Donaldson* and § 112, 6th par. for the limitations of "the jammed paper removing means", examiner points out to the applicant's representatives that MPEP 2106 (II) (C) says "the claimed means plus function limitations" are given "their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed". See *Kemco Sales, Inc v. Control Papers Company, Inc.*, 208 F. 3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Thus, in the specification, page 12, lines 14-17, it states that "the jammed paper removing means is so constructed that a [sic] one of cover plates 23 and 23' is formed to be resolved with a hinge shaft 81 in the center an elastic member such as a tension coil spring is provided between the cover plate 23 and base 21" and page 13, lines 2-3, it states, "the jammed paper removing means **may be** advantageously provided at the other cover plate 23'. This "jammed paper removing means" is interpreted as having alternatives since it is not clear from the language in the original specification. The "jammed paper removing means" may be at the cover plate 23 or at

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cover plate 23' or at both plates 23, 23'. Since the Office personnel are to give the claimed means plus function limitations their broadest reasonable interpretations described by the specification, elements of the combination of references of Arai in view of Veeder, and Tominaga as shown by Gonidec et al., Yokota et al., Nagasawa et al., and Jones et al. are the same or equivalent to the elements of the instant invention as described in the specification of the instant invention which has been identified as corresponding to the claimed "jammed paper removing means".

Claims 2, 3, 6, 7, 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata (567) in view of Veeder (786) and Tominaga (Japan, 10-324435).

Ogata discloses a copying apparatus with feeding units 16, 18 for feeding sheets of recording paper, and a paper guide unit 102 that pulls out when an operator pulls on handle 178 of the front cover 184 of subframe 158 for paper jam removal. This paper guide unit 102 reads on the instant invention's feeding unit assembly that is removably mounted. The feeding unit assembly 102 comprises an upper and lower stack guides 104 and 106 that read on the instant invention's cover plate and base member respectively. Note column 4, lines 5-10 and lines 35-50; and column 7, line 47-8.

Ogata differs from the instant invention by not disclosing an optional auxiliary device and the instant invention's jammed paper removal means.

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Veeder discloses using a laser printing apparatus with an optional auxiliary large capacity input tray 22 mounted on one side of the printer base 12. Note column 6, lines 6-24.

Tominaga (Japan, 10-324435) discloses a medium processing device that eliminates jammed documents, replacing parts, checking and cleaning the inside of a device with an upper guide plate 5 and a lower guide plate 6 held together by a tension spring 18. An operator lifts up the upper guide plate 5 so that it pivots on shaft 11 and separates from lower guide plate 6 at an angle so that a jammed document can be removed. Note abstract and Figs. 1-6. The benefits of using this arrangement with the tension spring 18 is that the guide plates do not fall in and catch the operator's hands when the operator is reaching in to gain access between the guide plates. Note translation done by Schreiber Translations, Inc, page 9, [0011].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Ogata with the large capacity input tray of Veeder because it is known in the art that large print jobs are desired and using a large capacity input tray such as disclosed by Veeder would prevent the operator from resupplying smaller input trays many times, thus saving time and is more efficient.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Ogata with the jam removal device as disclosed by Tominaga because Ogata recognizes the problem of paper jam occurring (note column 7, lines 55-57) and to solve such a problem, one would look to Tominaga for a safer jam paper removal device since Tominaga discloses gaining access to

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jammed documents without plates falling on the operator's hands. Note translation done by Schreiber Translations, Inc, page 9, [0011].

Since applicant's representatives argue using *In re Donaldson* and § 112, 6th par. for the limitations of "the jammed paper removing means", examiner points out to the applicant's representatives that MPEP 2106 (II) (C) says "the claimed means plus function limitations" are given "their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed". See *Kemco Sales, Inc v. Control Papers Company, Inc.*, 208 F. 3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Thus, in the specification, page 12, lines 14-17, it states that "the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be resolved with a hinge shaft 81 in the center an elastic member such as a tension coil spring is provided between the cover plate 23 and base 21" and page 13, lines 2-3, it states, "the jammed paper removing means **may be** advantageously provided at the other cover plate 23'. This "jammed paper removing means" is interpreted as having alternatives since it is not clear from the language in the original specification. The "jammed paper removing means" may be at the cover plate 23 or at cover plate 23' or at both plates 23, 23'. Since the Office personal are to give the claimed means plus function limitations their broadest reasonable interpretations described by the specification, elements of the combination of references of Ogata in view of Veeder and Tominaga are the same or equivalent to the elements of the instant

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invention as described in the specification of the instant invention which has been identified as corresponding to the claimed "jammed paper removing means".

Claims 2, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble- Jepson Claim and specification, page 2, lines 17-18) in view of Tominaga (Japan, 10-324435).

Applicant's admitted prior art in the preamble discloses all elements of the apparatus, process, and process of making except for apparatus, process, and process of making a jammed paper removing means.

Tominaga discloses a medium processing device that eliminates jammed documents, replacing parts, checking and cleaning the inside of a device with an upper guide plate 5 and a lower guide plate 6 held together by a tension spring 18. An operator lifts up the upper guide plate 5 so that it pivots on shaft 11 and separates from lower guide plate 6 at an angle so that a jammed document can be removed. Note abstract and Figs. 1-6. The benefits of using this arrangement with the tension spring 18 is that the guide plates do not fall in and catch the operator's hands when the operator is reaching in to gain access between the guide plates. Note translation done by Schreiber Translations, Inc, page 9, [0011].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's admitted prior art (preamble – Jepson claim and specification, page 2, lines 15-18) with the jam removal device as disclosed by Tominaga because it is well known in the art that paper sheet jam occurs

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along a sheet conveyance path in an image forming apparatus and that it is difficult to remove them sometimes especially when it is located in the main body of the image forming apparatus. This is discussed in the instant invention's specification, page 2, lines 15-18, of a conventional electro photo multi functional apparatus. In addition, sheet jams can occur due to a build up of static electricity, humidity, or heat inside of the image forming apparatus causing sheets to shift its position, curl up, or stick together. In order to remove a sheet jam from a sheet path such as a removably mounted feeding unit assembly as recited in the preamble, one looks to Tominaga one would look to Tominaga for a safer jam paper removal device since Tominaga discloses gaining access to jammed documents between guide plates and removing them without having the plates fall on the operator's hands. Note translation done by Schreiber Translations, Inc, page 9, [0011].

Since applicant's representatives argue using *In re Donaldson* and § 112, 6th par. for the limitations of "the jammed paper removing means", examiner points out to the applicant's representatives that MPEP 2106 (II) (C) says "the claimed means plus function limitations" are given "their broadest reasonable interpretation consistent with all corresponding structures or materials described in the specification and their equivalents including the manner in which the claimed functions are performed". See *Kemco Sales, Inc v. Control Papers Company, Inc.*, 208 F. 3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). Thus, in the specification, page 12, lines 14-17, it states that "the jammed paper removing means is so constructed that one of cover plates 23 and 23' is formed to be resolved with a hinge shaft 81 in the center an elastic member such as a

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tension coil spring is provided between the cover plate 23 and base 21" and page 13, lines 2-3, it states, "the jammed paper removing means **may be** advantageously provided at the other cover plate 23'. This "jammed paper removing means" is interpreted as having alternatives since it is not clear from the language in the original specification. The "jammed paper removing means" may be at the cover plate 23 or at cover plate 23' or at both plates 23, 23'. Since the Office personnel are to give the claimed means plus function limitations their broadest reasonable interpretations described by the specification, elements of the combination of references of Applicant's Admitted Prior Art (preamble – Jepson claim and specification, page 2, lines 17-18) as modified by Tominaga are the same or equivalent to the elements of the instant invention as described in the specification of the instant invention which has been identified as corresponding to the claimed "jammed paper removing means".

Response to Arguments

Applicant's arguments with respect to claims 2-19 have been considered but are moot in view of the new ground(s) of rejection.

Remarks

It is also noted that applicant's representatives discuss "*BUSHNELL DECLARATION*" in amendment filed 10/9/02. It is not understood why this is called Bushnell Declaration when the declaration is signed by a person name Frank J. Dynda.

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Is there a different declaration not of record the representative is discussing? In addition, it is also noted that an interview was set up by Frank Dynda, the person who sign the declaration, to discuss the application before the most recent amendment was filed 3/24/03. However, the interview did not take place for unknown reasons.

In addition, applicant states in remarks on page 23 of amendment filed 3/24/03 that "equivalency must exist in the same art or there must be a reason to believe that artisans in both of the two arts recognize the equivalency" and argues only with reference to Goindéc et al. as being not "art-recognized equivalents". Examiner disagrees with this for at least two reasons. First, springs are often used in the electrophotography art and when one wants to incorporate springs, one of ordinary skill in the art would consider analogous all areas that one could reasonably expect to find teachings of springs. Second, by applicant's own admissions, the analogous art is broaden to include at least areas covered by applicant's own declaration which are not limited to the electrophotography art. The declaration filed 10/9/02 states "a common example of a tension spring is a manual garage door opening spring, where the door is coupled to the garage with tension springs" and "examples of linkages are transmission control linkages, steering linkages, old fashioned sewing machine treadle linkages, and toy car pedal linkage" (note page 2, lines 2-6). The declaration attempts to show that springs and linkages are not equivalent, but the Examiner has shown evidence in the prior art that this is not true. Since applicant has discussed springs and linkages used in arts other than the electrophotography art, such examples of uses of the springs and linkages are in various areas that are not limited just to the electrophotography art.

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Applicant's representative continues to argue that there is no evidence to combine references and cites own case, *In re Lee*, 277F.3d 1338. Examiner disagrees because there is motivation shown in the references and found in the knowledge generally available to one of ordinary skill in the art as discussed above in the office action. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313,1317 (Fed. Cir. 2000). MPEP 2143.01.

It is noted that the translation to Japan document No. 10-324435 done for the US Patent and Trademark Office by Schreiber Translations, Inc has the inventor name spelled as "Tominaka". The inventor's name as appears on the English Abstract, copyright, 1998, JPO is "Tominaga". This is the same inventor, only the spelling of the last name is different. To be consistent, the Examiner has used "Tominaga" throughout the office action as the reference to Japan, document No. 10-324435 including the translation.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SL
May 25, 2003


SUSAN S.Y. LEE
PRIMARY EXAMINER